C
Ar4H
1896/97
Arizona Territorial Normal
1896—1897
UNIVERSITY OF ILLINOIS LIBRARY
FEB 1 1921
UNIVERSITY OF ILLINOIS
UNIVERSITY OF ARIZONA
FEB 7 1917

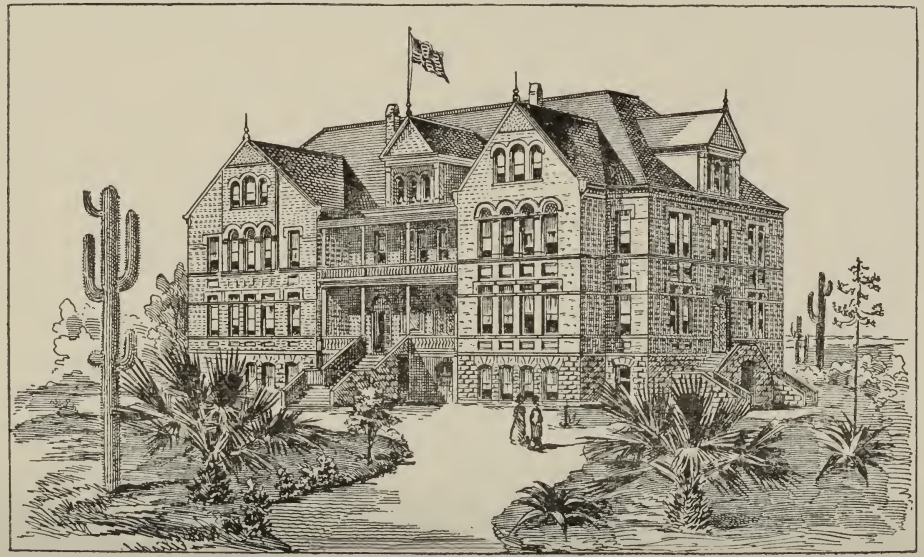
Tempe

ARIZONA

TERRITORIAL NORMAL SCHOOL.

1896 — 1897.

1881 — 1897



ANNUAL CATALOGUE

OF THE

Territorial Normal School

AT

TEMPE, ARIZONA.

FOR THE

Scholastic Year 1896-7.

AND

Annual Circular for 1897-8.

Calendar for 1897-8.

The school year is divided into two semesters of twenty weeks each. Each semester is divided into two terms of ten weeks each.

1897.

First semester begins	September 6
Entrance examinations and registration	Sept. 6-7
First Quarter ends	November 12
Second Quarter begins	November 15
Thanksgiving vacation	November 25
Holiday vacation begins	December 25

1898.

Holiday vacation ends	January 2
First semester ends	January 28
Second semester begins	January 31
Washington's Birthday vacation	February 22
Third Quarter ends	April 7
Fourth Quarter begins	April 10
Anniversary and Commencement Exercises	June 13, 14, 15, 16

Board of Education.

MEMBERS EX OFFICIO.

HON. T. E. DALTON ..... Phoenix
Superintendent of Public Instruction, Secretary.

HON. T. E. FARISH ..... Phoenix
Territorial Treasurer, Treasurer.

MEMBERS BY APPOINTMENT.

GEN. J. F. WILSON. ..... Phoenix
President.

MRS. CLARA A. EVANS ..... Phoenix

Regular meetings during first week in January
and first week in June.

Official Board of Visitors.

DR. CHAS. H. JONES ..... Tempe
HON. WILLIAM NEWELL ..... Mesa
MRS. W. H. STILWELL ..... Phoenix

Faculty.

1896-97.

JAS. McNAUGHTON, A. M., PH. D.....President
Psychology, Pedagogics and Mathematics.

LAURA W. SHARPE, B. E., B. O.
Language, Elocution and Physical Culture.

FRED M. IRISH, B. S.
Natural Sciences.

KATE BEE GRISWOLD.
History, Geography and Literature.

MARGARET GRAHAM HOOD.
Director of Practice School.
Methods.

INSTRUCTORS IN AUXILIARY CLASSES.

FRANCES B. ABELL.
French, German, Shorthand and Bookkeeping.

ELLA F. TAYLOR.
Vocal and Instrumental Music.

AMINA J. McNAUGHTON.
Latin, Drawing and Painting.

Register.

GRADUATE STUDENTS.

Culver, Nellie Edith	Tempe
Culver, Caroline	Tempe

UNDER-GRADUATE STUDENTS.

FIRST SECTION.

Austin, Alverta May	Tempe
Davis, Robert Cornelius	Forrest City, Ark.
Finley, Sarah Elizabeth	Tempe
Hansen, Julius Gustav	Phoenix
Hauxhurst, Adele	Phoenix
Huffer, May Carrie	Tonto
Martin, Jane Phoebe	Prescott
Miller, Anna Manuela	Tempe
Miller, Clara Marie	Tempe
Mills, Flora Laverne	Phoenix
Mullen, John Oscar	Tempe
Newell, Fay Lulu	Mesa
Peyton, Ada May	Florence
Robinson, Mary Cornelia	Mesa
Schwarz, Lucy Mae	Lehi
Sirrine, Addie	Mesa
Vanderhoof, Verner A	Paola, Kansas
Wilson, Walter Simon	Phoenix
Windes, Alice Boise	Cottonwood

SECOND SECTION.

Abell, Edith Rebecca	Mesa
Allison, Garnet Ione	Peoria
Archibald, Bessie Frances	Tempe
Bellamy, Worth Thomas	Tempe
Cartledge, Crantz	Tempe
Clark, Maude Rebecca	Mesa
Clark, Nellie E	Mesa
Collins, Guy Custer	Tempe
Cosby, Ashton Burton	Tempe

Cosner, Carrie Belle	Tempe
Cuber, Louis	Mesa
Davis, Henry Willard	Lehi
Duncan, Robert Obarr	Phoenix
Fisher, Inez Beatrice	Tempe
Flummerfelt, Elijah Jenkins	Tempe
Gage, Louie Viola	Tempe
Garland, Mabel Alicene	Pomona, Calif.
Goodwin, Garfield Abram	Tempe
Greene, Vernette	Phoenix
Haigler, Charles Alvin	Tempe
Hall, Alice May	Congress
Hanna, Una Belle	Tempe
Hartsfield, Lena Pearl	Walker
Hauxhurst, Ella Leota	Phoenix
Hayden, Sallie Davis	Tempe
Hendrix, Harry Garland	Tempe
Hill, Ruth Eva	Phoenix
Ivy, James Pleasant	Phoenix
Jones, Daniel Dudley	Lehi
Lincoln, Daisy Maude	Phoenix
Marshall, Grace	Phoenix
Melton, Julia Ellen	Tempe
Miller, Esta Maria	Skull Valley
Moore, Martha Isabel	Phoenix
Morse, Alice Augusta	Tempe
Newell, Grace Jemima	Mesa
Orme, Ethel May	Phoenix
Ozanne, Edna Antoinette	Tempe
Pearce, Zebulon	Mesa
Peyton, Emma Belle	Florence
Perry, Minnie Adeline	Cordes
Perry, Charlotte Elizabeth	Cordes
Phelps, William Richmond	Phoenix
Priest, Clara	Tempe
Redden, Homer	Tempe
Redden, Monroe	Tempe
Ricketts, Ida May	Phoenix
Simmons, Lulu Frances	Prescott

Standage, Marion Armenia ..... Mesa
Stewart, Clyde Alexander ..... Tempe
Swiggett, Ida Warren ..... Phoenix
Temple, Ida Wheatley ..... Benson
Tucker, Ruby Mabel ..... Tempe
Wallace, Mary Malvina ..... Mesa
Welborn, Rena Belle ..... Phoenix
White, Veronica Janet Demara ..... Phoenix
Wilson, Clara ..... Tempe
Wingar, Lulu Belle ..... Tempe
Woolf, William Henry ..... Tempe

THIRD SECTION.

Appleby, Alice ..... Tempe
Austin, Albert Warren ..... Tempe
Bailey, Elsworth ..... Mesa
Bonorand, Anna Mary ..... Bisbee
Carroll, Charles ..... Tempe
Cave, Anna Elizabeth ..... Tempe
Cosner, Elizabeth ..... Tempe
Crockett, Hyrum ..... Pima
Cummins, Chester Leslie ..... Tempe
Cummings, Hattie Belle ..... Tempe
Dana, Clarence ..... Mesa
Davis, Alma Morgan ..... Lehi
Davis, Charles Thomas ..... Lehi
Edwards, Ernest David ..... Tempe
Ennis, Josephine ..... Silver King
Fitzhugh, Thomas William ..... Tempe
Fuller, Anna ..... Mesa
Gibson, Cretie ..... Lehi
Greene, Ella Byrd ..... Phoenix
Hall, Harley Odell ..... Congress
Hall, Clara Frances ..... Congress
Hicks, Benjamin Edward ..... Globe
Holladay, Dora Verdelle ..... Tempe
Hobson, Emma ..... Mesa
Hornebeck, Charles ..... Mesa
Hough, Bessie ..... Tempe
Jackson, Katherine ..... Los Angeles, Calif.

Jones, Walter Wendell ..... Phoenix
Laird, Minnie Alvira ..... Tempe
Martin, Parmelia Ermina ..... Tempe
McDonald, Charles ..... Tempe
McGrew, John Wesley ..... Tempe
McQueen, Donald Thomas ..... Tempe
Melton, John ..... Tempe
Messinger, Blake Smith ..... Mesa
Miller, Albert James ..... Tempe
Mills, Calla Lillie ..... Phoenix
Newell, Sibyl Cora ..... Mesa
Nicholas, Eva ..... Tempe
Ozanne, Philo Haystradt ..... Tempe
Pearce, Jessie R. ..... Mesa
Pearce, Joseph ..... Snowflake
Phelps, Gove Edwin ..... Mesa
Pomeroy, Emma Charlotte ..... Mesa
Power, Arthur Lisle ..... Mesa
Puntenney, Susan Edith ..... Storm
Puntenney, Etta Violet ..... Storm
Redden, Enos A. ..... Tempe
Rogers, Collins Centennial ..... Tempe
Root, Glen Gardiner ..... Tempe
Sanders, Myra Irene ..... Lehi
Saylor, John ..... Tempe
Saylor, Mary Susan ..... Tempe
Schmidt, Lulu Katharina ..... Tempe
Schmidt, Henry Fred ..... Tempe
Schwarz, Bessie ..... Lehi
Sirrine, Serretta Ann ..... Mesa
Standage, Orrin Lewis ..... Mesa
Standage, Orpha Caroline ..... Mesa
Stewart, Alva ..... Mesa
Stewart, Edith Frances ..... Tempe
Stewart, Helen Marion ..... Tempe
Sweeney, Mary Louise ..... Florence
Taylor, George Alvin ..... Lehi
Terry, David A. ..... Mesa
Turman, Sadie ..... Mesa
Turman, Tabitha Elinor ..... Mesa

Warren, Lulu Mussett	Phoenix
Webb, Lila Grace	Cline
Webster, Evelyn	Tempe
Westover, Clarence	Mesa
Wheeler, Lois Ada	Tempe
Whitehead, Clayton Legrand	Mesa
Willis, Louisa Anna	Prescott
Wilson, Donna Gertude	Phoenix
Woodling, George Walter	Mesa
Woolf, James Oscar	Tempe

SPECIAL STUDENT.

Kimball, Carroll	Chicago, Ill.

Alumni Register.

CLASS OF 1887.

Etta Bromell.....Taught three years.....Tempe, Arizona
(Mrs. John Johnson)
Georgia Holmesley.....Taught eight years.....Tempe, Arizona
Reese M. Ling.....City Judge.....Prescott, Arizona
Jas. H. McClintock .....Taught five years.....Phoenix, Arizona
(Associated Press Agent)
Gertrude Pomeroy‡.....Taught five years .....

CLASS OF 1888.

Kate Cummings.....Taught two years.....Tempe, Arizona
(Mrs. Fisher Bailey)
Martha Sears.....Taught five years.....Tempe, Arizona
Henry Q. Robertson .....Taught five years.....Globe, Arizona

CLASS OF 1890.

Nanna Brown.....Taught three years.....Tempe, Arizona
(Mrs. John Knight)
Lena Coughran.....Taught one year .....Williamson Valley, Arizona
(Mrs. J. M. Sears)
Russel White*. .....Naval Cadet.....Annapolis, Maryland

CLASS OF 1891.

Lee Gray, LL.B. Yale '93 ...Attorney.....Phoenix, Arizona
Josephine Frankenberg.....Taught five years.....Tempe, Arizona

CLASS OF 1892.

Lillian J. McAllister..... Los Angeles, California
Victoria B. Shaw .....Taught one term..... Phoenix, Arizona

CLASS OF 1893.

Manie Anderson..... Taught four years ..... Gila Bend, Arizon
Agnes Halbert‡.....
W. I. Melton.....Taught five years.....Phoenix, Arizona
Lida Rembert.....Taught one year.....Los Angeles, Cal.
Mary Wingar.....Taught four years.....Tempe, Arizona
Chas. C. Woolf. .....Attorney .....Tempe, Arizona
(LL. B. Univ. Colo.)

‡ Deceased. * Received certificate of course finished.

CLASS OF 1894.

Myrtle Aplin.....Taught one year.....East Highlands, California
Joseph T. Birchett.....Taught one year.....Tempe, Arizona
Addine Bury.....Taught three years.....Phoenix, Arizona
Nettie Clay.....Taught one year.....Tempe, Arizona
(Mrs. Ashby Hawes)
Agnes Dobbie.....Taught three years.....Goldfield, Arizona
Allie Gray.....Taught three years.....Phoenix, Arizona
Leroy F. Hill.....Sec'y Tempe Canal Co.....Tempe, Arizona
Mary E. McNeil.....Taught three years.....Tempe, Arizona
John Metz.....Taught three years.....Mesa, Arizona
Blanche Newell.....Taught three years.....Mesa, Arizona
Rosina Pomeroy.....Taught three years.....Mesa, Arizona
Ella Saunders.....Taught two years.....Payson, Arizona
(Mrs. Corydon Taylor)
Anna R. Stewart.....Taught three years.....Tempe, Arizona
Ida W. Woolf.....Taught two years.....Tempe, Arizona

CLASS OF 1895.

Miriam Anderson.....Taught two years.....Gila Bend, Arizona
John R. Birchett.....Taught two years.....Tempe, Arizona
John J. Carroll.....Tempe, Arizona
Carrie Culver.....Taught two years.....Tempe, Arizona
Lottie Gibson.....Taught two years.....Lehi, Arizona
Allie Holmesley.....Taught two years.....Tempe, Arizona
J. Wallace Morse.....Taught two years.....Tempe, Arizona
Chas. P. Mullen.....Tempe, Arizona
Roscoe Walsworth.....Taught two years.....Tempe, Arizona
Maude J. Welcome.....Taught two years.....Tempe, Arizona
Bertha Wilson.....Taught two years.....Tempe, Arizona
E. Stanley Windes.....Taught two years.....Cottonwood, Arizona

CLASS OF 1896.

J. Lawrence Abell.....Taught one year.....Mesa, Arizona
Nellie E. Culver.....Taught one year.....Tempe, Arizona
Don J. Frankenberg.....Taught one year.....Tempe, Arizona
Roy Frankenberg.....Tempe, Arizona
Nott E. Guild.....Wilcox, Arizona
Florence G. Hanna.....Taught three years.....Tempe, Arizona
Carl T. Hayden.....Student, Stanford University.....Tempe, Arizona
Jane M. Hedgpeth.....Taught one year.....Phoenix, Arizona
Lewis P. Hedgpeth.....Taught one year.....Phoenix, Arizona
Georgia A. Hendrix.....Taught one year.....Tempe, Arizona
Amina W. McNaughton.....Student, University of California...Tempe, Arizona
Deborah I. Morris.....Student, N. E. Conservatory Music...Boston, Mass.
Julia R. Nichols.....Taught one year.....Tempe, Arizona
Bertha M. White.....Taught one year.....Tempe, Arizona

Normal Department.

COURSES OF STUDY.

It is the purpose of the high school and the college, to impart instruction in the various branches of useful knowledge; but of the normal school, not only to give instruction in the various branches, but also in the processes by which the mind acquires knowledge and power, and in the pedagogical procedure based thereon.

The elementary course of study, comprising academic and professional work, requires three years for its completion.

The advanced course of study, comprising the same professional work as the elementary course, and a greater amount of academic work, requires four years for its completion.

The tabulated "Outline of the Elementary Course of Study" indicates the subjects to be pursued, their order of arrangement and the time alloted to each in that course. The "Analysis of the Courses of Study" indicates their aim and scope.

Outline of the Elementary Course of Study.

FIRST YEAR. FIRST SEMESTER.

FIRST QUARTER.		SECOND QUARTER.	
Arithmetic	5	Arithmetic	5
Drawing	2	Drawing	2
Zoology	5	Physiology	5
Grammar	5	Grammar	5
Orthography	1	Orthography	1
Penmanship	2	Penmanship	2
Reading	2	Reading	2

FIRST YEAR, SECOND SEMESTER.

THIRD QUARTER.		FOURTH QUARTER.	
Algebra	5	Algebra	5
Drawing	2	Drawing	2
English	5	English and Composition	5
United States History and Political Geography	5	Physics	5
Music	1	Music	1
Orthography	1	Orthography	1
Reading	2	Reading	2

SECOND YEAR, FIRST SEMESTER.

FIRST QUARTER.		SECOND QUARTER.	
Rhetoric and Composition	5	Rhetoric and Literature	5
Algebra	5	Geometry	5
General History	5	General History	5
Psychology	5	Psychology	5

SECOND YEAR, SECOND SEMESTER.

THIRD QUARTER.		FOURTH QUARTER.	
English Literature	5	Bookkeeping	5
Geometry	5	Geometry	5
Botany	5	Botany	5
Psychology	5	Psychology	5

THIRD YEAR, FIRST SEMESTER.

FIRST QUARTER.		SECOND QUARTER.	
Physical Geography	5	Physical Geography	5
School Management	5	History of Education	5
Methods	5	Methods	5
Observation in Model School	5	Practice Teaching	5

THIRD YEAR, SECOND SEMESTER.

THIRD QUARTER.		FOURTH QUARTER.	
Chemistry	5	Geology	5
Elocution and Physical Culture	5	Elocution and Physical Culture	5
Methods	5	Practice teaching	5
Science of Government	5	Theses	5
Practice Teaching	5	Methods	5

Rhetorical and physical exercises and military drill at stated intervals throughout the whole course.

The figures attached to each branch indicate the number of hours per week assigned to it

Auxiliary Classes.

BUSINESS DEPARTMENT.

The course of study in this department comprises phonography or shorthand, typewriting, advanced bookkeeping and business forms and methods.

A full course consists of twenty-five lessons given semi-weekly.

Instruction in these branches will be given by Mrs. Frances B. Abell at the following rates:

A full course in either bookkeeping or phonography to single students $25.00

To students, in classes of ten or more, each .. $15.00

Reporting style at same rate.

Instruction in typewriting free to those receiving lessons in phonography.

DEPARTMENT OF MODERN LANGUAGES.

In this department, instruction will be given in French and German by Mrs. Frances B. Abell at the following rates:

Single lessons	50 cents.
Classes of five, each	40 "
Classes of ten, each	30 "

DEPARTMENT OF ANCIENT LANGUAGES.

Instruction in Latin will be given in this department by Mrs. Amina J. McNaughton, at the following rates:

Single lessons	50 cents.
Classes of five, each	40 "
Classes of ten, each	30 "

ART DEPARTMENT.

The work of this department includes pencil, charcoal and crayon drawing, and painting in oil and

water colors. Instruction will be given by Mrs. Amina J. McNaughton, at the following rates:

Lessons, single, two hours	$1.00
" " one hour	.50
" classes of five, two hours, each	.40
" " ten, " "	.30

CONSERVATORY OF MUSIC.

Private instruction will be given to students in vocal and instrumental music by Miss Ella F. Taylor, at the Conservatory of Music, at the following rates:

One lesson a week, ten weeks, instrumental or vocal	$10.00
Two lessons a week, ten weeks, instrumental or vocal	$15.00

Analysis of Courses of Study.

READING.

Reading, as the term is generally understood, consists of two quite distinct processes; the first, that of gaining the thought from written or printed characters; the second, that of giving it effective expression.

True effective expression is the result of well regulated mental activity upon a thoroughly trained and developed physical organism.

The thought, vividly conceived, contains within itself the power, to a great extent, of generating its appropriate expression; but this is not true of thought as ordinarily grasped by the mind of the reader. The great obstacle to proper expression is vague thought conception.

It is the aim of the instruction in this department, to lead the student to grasp the thoughts symbolized on the written or printed page as real entities

and living truths; to intensify mental pictures by exercising the imagination; to cultivate the voice, as the chief instrument of expression, by proper drills designed to give it greater power, scope, and accuracy of modulation; to cultivate the ear, as the arbiter of vocal expression, to a nice discrimination of tones; and to train the muscles into ready submission to mind, in expressing thought and feeling by attitude, gesture and facial movement.

It is also the aim of this department, to lead the student so fully to appreciate the thought and sentiment of the selections read, as to cultivate a taste for good reading.

TOPICS FOR STUDY IN ACADEMIC WORK.

Carriage and attitude of the body; breathing exercises; vocal elements of language; articulation; enunciation; pronunciation; force; pitch; quality of tones; effect of imagination on expression; effect of mental states on expression; cultivation of mental states; relation of voice and gesture; expressive use of body.

TOPICS FOR DISCUSSION IN METHODS IN PRIMARY GRADES.

Primary reading methods—phonic, alphabetic, phonetic, synthetic sound, objective, word, sentence; selection of the available features of all these methods, and the proper combination of them to produce the best results in first reading; what words to present first to the child; how to present new words; how to impress them; what a primary reading lesson ought to comprise, and what not; how to remedy drawling, lisping, and repeating; how to secure natural tones, fluency and correct expression; sense reading; use of objects and pictures; use of blackboard and charts; hunting exercises; seat work; manner of teacher; connection between reading and spelling, between reading and writing.

TOPICS FOR DISCUSSION IN METHODS IN HIGHER GRADES.

Kind of reading matter suitable for the different grades; assignment of lesson; review; preliminary exercises; preparation of lesson by teacher, by pupil; illustrative reading by teacher; sight reading; things to be avoided; correction of errors, time for, manner of; correct vocal expression, what it consists of, how it may be obtained; illustration of muscular movements to intensify expression; application of psychological principles.

GRAMMAR AND COMPOSITION.

In the study of language, two lines of procedure suggest themselves, the analytic and the synthetic. The principles discovered by the former systematized, form the basis of the science called grammar; of the latter, composition.

Grammar establishes principles and formulates rules by which the correctness of the use of word forms in a sentence to express a particular thought, may be tested.

Composition presents the principles and rules by which the different forms of discourse are constructed from sentences.

In grammar the sentence is the integral unit which is to be separated into its elements; in composition, the sentence is but a component element of discourse. All the principles of these sciences are conventional and based on reputable usage. The chief value of these studies is to give the student a ready and accurate use of language.

The aim of instruction in this department, is to enable the student to get a clear view of the relation of the sentence to the word and the discourse, and to enable him to proceed inductively to establish the principles and formulate the rules of etymology and

syntax, and to train him to speak and write his mother tongue with facility and accuracy.

TOPICS FOR STUDY IN ACADEMIC WORK.

The sentence—considered as the expression of thought, as composed of elements, the symbols of ideas and relations; the sentence—classified as to the number of propositions, as to rank of clauses, as to manner of expressing thought; classification of its elements—as to rank, as to use, as to number of parts, as to expression of ideas or relations; sentences of each class treated as to capitalization, punctuation, arrangement of elements; elements of the sentence classified according to use, as parts of speech; modifications of parts of speech; proper use of tense forms and mode forms in principal and subordinate clauses; correction of false forms; application of principles and rules of etymology and syntax by analyzing and parsing sentences connected in discourse, in prose and poetry, from many interesting selections; sentences in discourse treated as to their logical relations, as to the construction of the paragraph.

TOPICS FOR DISCUSSION IN METHODS.

Language lessons—object of, time devoted to, kinds, material from nature, material from literature; lesson giving—plans for, preparation for; use of pictures; connection of language lessons with primary reading; proper form of written work, its illustration, method of securing it; object of composition; awakening and sustaining interest; correcting errors; text-books—first use of, manner of using; connection of composition with literature; development of ideas of parts of speech, of their accidents; development of rules; graphic representation of relations of parts of speech in the sentence; value and limitation of parsing, of oral analysis, of diagrams; relation of grammar to logic.

ORTHOGRAPHY AND WORD ANALYSIS.

The work in this department comprises the study of correct representation of words by letters, correct utterance of words, the formation of words from roots and affixes, and their meaning as indicated by their component parts.

Its purpose is to give the student such a drill as will result in correct spelling, accurate pronunciation, propriety and precision of diction, and a ready comprehension of the meaning of words derived from the common roots and affixes.

TOPICS FOR STUDY IN ACADEMIC WORK.

Form of words; power of letters; accent; syllabication; capitalization; diacritical marks; roots and affixes—Latin, Greek, French, Italian, Spanish, Anglo-Saxon, miscellaneous; rules for spelling.

TOPICS FOR DISCUSSION IN METHODS.

Spelling—phonic, alphabetic, written, oral; the selection of words: the spelling book; rules for spelling, development of, use of; the writing speller; spelling in the several grades of the common school, manner of conducting it in each, time devoted to it in each; the spelling reform; use of dictionary; analytic process; synthetic process; use of the laws of memory; plans for awakening and sustaining interest.

RHETORIC.

The point of view kept in this branch throughout is, that the study of rhetoric is the constructive study of literature, and the examples adduced at every point aim to show the usages of the best writers.

The teaching of the subject has three special objects; first, to impart something that shall be recalled by spontaneous association, and found useful when the student enters upon his life work; second, to arouse a desire for sober accuracy in thought expression; and, third, to enable him to see the truth for himself.

This is anterior to and apart from the superintendence of the student's work in composition, as a practical knowledge is induced fully as much by creating an impulse, and kindling a love for literature, as by criticising details of composition.

To cultivate observation, ease of expression, and regular habits of work, many themes will be given, advancing by easy steps from simple description to exposition and to the construction of argument.

A text-book furnishes a basis of procedure, but discussion is encouraged on the part of the student, the aim being not merely to ground the student in a knowledge of the various principles, but also, in each case, to base that knowledge on a practical philosophy, and to induce in his mind from the outset the habit of thinking for himself, and applying his thought to constructive and critical work.

TOPICS FOR STUDY IN ACADEMIC WORK.

Choice and use of words as to purity, propriety, precision; the sentence; the paragraph; the theme; variety of expression in prose, in poetry; figures of speech; style, its properties; kinds of discourse; versification.

TOPICS FOR DISCUSSION IN METHODS.

Relation of rhetoric to grammar, to literature; object of study of rhetoric; development of principles and formulation of rules; application of principles; selection of illustrations; correction of errors in students' style; use of text book; supplementary work; composition.

LITERATURE.

The aim of instruction in this department, is to direct and to assist the student to read appreciatingly the masterpieces of the great authors, to guide him rationally and sympathetically into their thought and feeling, and assist him to profit by following the thoughts of master minds. As aids to this, short dissertations on the characteristics and philosophy of style will be given, and a constant application of the principles of rhetoric will be required.

A few of the authors generally conceded to be fairly representative of the status of the literature of their respective times, will be characterized; the history of literature briefly sketched up to the time of the author whose works are to be discussed; the environment of the author considered, his influence upon literature brought out, his masterpieces characterized, and the student, so far as possible, led to appreciate its beauties and excellencies. This branch is to be studied in connection with history.

TOPICS TO BE STUDIED IN ACADEMIC WORK.

Beginnings of English literature; effect of Norman conquest; early modern English; Renascence influence; Italian influence; characteristics of Elizabethan age; Puritan influence; revival of poetry; chief characteristics of American literature; classic selections to be studied critically—Chaucer's Canterbury Tales; Spencer's Færie Queen, first book; Shakespeare's Julius Cæsar, and also Macbeth; Irving's Sketch Book; selections from Bryant, Longfellow, Cooper, Emerson and Hawthorne.

TOPICS FOR DISCUSSION IN METHODS.

Selection of classics suitable for several grades of common school work and manner of presentation in each; characterization and criticism, oral, and in essay form; awakening interest; comparison of styles; connection of literature and geography.

MATHEMATICS.

The work of this department is designed not so much to make the student an expert computist and accountant as to give him the power to reason vigorously, to enable him to proceed logically, and also, to cultivate in him expression; not so much to assist him to memorize facts of processes, as to give power to grapple successfully with new difficulties by the application of principles mastered.

It is also the aim to connect each topic of study with as many objects of interest as possible, to point out their logical connection, and to require the student to put as much thought as possible with all mathematical drill, and thereby lessen the necessity of drill for the sake of training only.

The student is required to acquire a thorough knowledge of the processes, forms of expression, history and pedagogy of the several subjects comprised in this department.

NUMBER AND ARITHMETIC.

TOPICS FOR STUDY IN ACADEMIC WORK.

Percentage; ratio; proportion; involution; evolution; mensuration; series; progressions; the applications of each respectively.

TOPICS FOR DISCUSSION IN METHODS.

The child's first notion of number, how obtained, how expressed, how made the basis of number work; the use of objects, such as cards, counters and other devices, in teaching number, in developing the decimal system, in developing the fundamental operations; the Grube method; which process, analysis or synthesis, is first manifested by the child; oral expression of analysis; written expression of operations, form and variety of them; numbers to be taught the first year, the second, the third; when text books shall be first used, how; when fractions should be

introduced; when concrete number exercises should be superseded by abstract; to what extent number may be correlated with other subjects; what relative time should be given to it; how accuracy may be obtained, rapidity; to what extent drill for rapidity is profitable; the logical order of presentation for each topic of study, the pedagogical; the best form of written expression for each operation; when definitions should be taught, rules, how; arrangement of topics in text-books; analysis, its logical forms of expression.

ALGEBRA.

TOPICS FOR STUDY IN ACADEMIC WORK.

Notation and definitions; fundamental operations; factoring; fractions; simple equations; simultaneous equations; negative results; involution; evolution; theory of exponents; radicals; quadratic equations; arithmetical series; geometrical series; proportion; maxima and minima; inequalities; indeterminate equations; Horner's method of approximation.

TOPICS FOR DISCUSSION IN METHODS.

Suitable illustrations of the significance and use of symbols of operation, of relations, of quantities, of axioms; apt illustrations of the meaning of the terms, addition, subtraction, coefficient, exponent, and of all other technical terms used: geometric and graphic representation of the simpler expressions; concise and convenient forms for expressions of operations and relations; significance of transformations of equations; expression of formulæ in oral language; how to form an equation; interpretation of results; utility and power of algebraic investigations; history of algebra.

GEOMETRY.

TOPICS FOR STUDY IN ACADEMIC WORK.

Logico-mathematical terms; geometrical concepts; straight lines and angles; triangles; quadrilaterals;

other polygons; circles; proportion; mensuration of plane figures; similar plane figures; original demonstrations of theorems; planes; solids with plane surfaces; solids with curved surfaces.

TOPICS FOR DISCUSSION IN METHODS.

Basis of geometrical investigation, its value; illustration of logico-mathematical terms, of geometrical concepts, formation of them; forms of deductive reasoning; stages in a demonstration; practical application of principles demonstrated; value of the scholium; demonstration by superposition, by *reductio ad absurdum*, by theory of limits, by method of exhaustion, their value and interrelation; history of geometry.

NATURAL SCIENCE.

The aim of this department is to give the student a working knowledge of the fundamental principles of natural science, to acquaint him with systematic methods of scientific study and original investigation, and to enable him to become fairly expert in the construction and handling of simple apparatus, and to acquire facility in the use of such materials as can readily be obtained, and such as will be required in conducting the nature study lessons and the observation lessons in the country and district schools.

As far as practicable, the student performs his own experiments, and makes his observations at first hand. Original investigation, along proper lines, is encouraged, extra facilities being furnished when possible, and when time will permit.

BOTANY.

The study of botany is selected as the branch of natural science best adapted to cultivate the powers

of observation in the student and to form habits of orderly thought and accurate description. More time is therefore devoted to this study than to any other branch of science. The course is chiefly devoted to a laboratory study of specimens and material with a view to acquiring a working knowledge of the important facts and principles underlying vegetable anatomy and physiology. Enough time is given to the study of typical plants to enable the student to become familiar with the leading characters of the several sub-kingdoms and of the more important orders and genera of flowering plants. More time is given to work upon the phanerogams for the reason that, as a general rule, they are more easily studied, presenting fewer difficulties to the beginner, and because they furnish more material suitable for object lessons and nature study work in the primary and secondary schools. The aim is not to confine the work to any one division of the vegetable kingdom, but to give a connected idea of the whole. The work is not limited to a study of terms and definitions, nor to the acquiring of facility in the mechanical handling of an artificial key, but the botanical vocabulary is acquired by contact as the terms are needed in the work. Students are, however, taught the purpose and use of a manual or flora in identifying species, so that those who so desire, may independently pursue work in this line beyond the limits of the school course.

The work begins in the early spring with a study of twigs and buds, and proceeds step by step with the advancement of the vegetation, through the various details of root, stem, leaf, flower and fruit. Then individual species are studied as they come into flower, each with a view to the illustration of the characters of some order or other group, or of some fundamental principle of plant life.

Attention is paid to the economic value of plants and to the effects of proper cultivation, etc., and the

student is encouraged to make original observations upon the mode of growth, time of blossoming, fertilization and disorders of the common plants of the vicinity.

The Salt River Valley and the surrounding region are rich in an interesting flora, and abound in material suited to the illustration of the course presented.

TOPICS FOR STUDY IN ACADEMIC WORK.

Buds and their arrangement; stems, their structure; the bark; the wood; the cambium; different kinds of stems; special forms of stems; development of buds; roots; the leaf, duration, arrangement, parts, venation, outline, margin and division; special forms of leaves; inflorescence; the flower; the fruit and seed; typical plants of the vicinity illustrating characters of the principal orders of spermaphytes; ferns; mosses; relatives of mosses; fungi; outline of the vegetable kingdom; methods of collecting and preserving specimens.

TOPICS FOR DISCUSSION IN METHODS.

Purpose of and plans for nature study; value of plant lessons—(*a*) formative value, (*b*) content value; awakening and sustaining interest; cultivating the pupil's powers of observation; obtaining suitable material; graded lessons for common schools; time to be allotted to study of plant life; work for different seasons and for different localities; introduction and use of technical terms; cultivation of æsthetic taste; appreciation of harmony of color, form; procedure, value and limitation of representation by modeling and painting; use of text-book.

ZOOLOGY.

The work in this branch comprises a laboratory study of types of the more important groups, supplemented by discussions of fundamental principles.

The student is led to observe, and to glean his knowledge of the subject from the specimens before him. His notes thus become his text-book, and he learns the value of careful, precise and systematic record of his observations. The knowledge of the types studied is expanded by references to standard works on zoology in the school library.

Instruction is given in methods of collecting and preserving insects and the skins and skeletons of birds and mammals.

TOPICS FOR STUDY IN ACADEMIC WORK.

The cell; the amœba; points of difference between plant life and animal life; Protozoa—type, Paramœcium and Vorticella; Cœlenterata—type, the common star fish; Vermes—type, the earth worm; Mollusca—type, the fresh-water mussel; Arthropoda—type-, the crayfish, the lobster, the scorpion, the spider, the grasshopper; Vertebrata—type, the frog; a brief study of systematic zoology with introduction to the character and classification of the native insects, birds and mammals of Arizona.

TOPICS FOR DISCUSSION IN METHODS.

Kind and amount of direction by teacher; graded lessons for common schools; procedure, value, and limitation of representation by drawing and painting; purpose of, procedure in presenting, and time devoted to nature study lessons in the several grades of common schools: use of text-books.

PHYSIOLOGY.

The work under this head forms a continuation of the course in zoology. The general notions obtained during the study of comparative animal morphology are now discussed more in detail in connection with human anatomy and physiology.

The course is illustrated throughout by speci-

mens, microscopic material, and by simple dissections upon small mammals, as the cat and the rabbit.

TOPICS FOR STUDY IN ACADEMIC WORK.

Proximate principles; cell structure; tissues; anatomy; the skeleton; the muscular system; circulation; respiration; nutrition; digestion; the nervous system: the skin; foods, waste and repair; hygiene; the care of the body; effects of stimulants and narcotics; the special senses; emergencies; first aid to the injured; hemorrhage; simple bandaging; poisons and their antidotes; disinfectants.

TOPICS FOR DISCUSSION IN METHODS.

Method of observing form of organs and their structure; illustrations of functions of organs; dissection of small animals, and drawings and description of parts dissected; use and value of blackboard drawings; use of skeleton, manikin, casts, models; use of text-books.

GEOLOGY.

This subject furnishes an abundant supply of material for nature study, and is thus especially valuable to the prospective teacher.

The course is intended to enable the student readily to recognize and distinguish the common rocks and minerals, and the geological formations of the vicinity, as well as to obtain a general idea of the operation of various geological agencies as factors in world building, and of the succession and development of life upon the earth's surface.

Field work by the class as a whole or in sections is a feature of the course, excursions being made at intervals to the various points of geological interest in the vicinity.

TOPICS FOR STUDY IN ACADEMIC WORK.

1. Dynamical geology. Atmospheric agencies;

aqueous agencies; organic agencies; igneous agencies.

2. Structural geology. General form and structure of the earth: stratified rocks; unstratified or igneous rocks; metamorphic rocks; structures common to all rocks; denudation or general erosion.

3. Historical geology. General principles; Archæan system and Eozoic era; Paleozoic rocks and era: Mesozoic era; Cenozoic era; Pyschozoic era.

TOPICS FOR DISCUSSION IN METHODS.

Preparation and presentation of subject matter for, and time devoted to nature study in the grades of the common schools: illustrations by diagrams and drawings: use of charts, maps and pictures: use of text-book and note-book.

PHYSICS

The aim of the work in physics is two-fold; first, to give the student a knowledge of the theory of the constitution of matter and of physical laws governing its phenomena, and second, to acquaint him with the use of experimental methods in scientific study and investigation.

The laboratory method is used, the student being required to perform his own experiments.

Practical instruction is given in the construction and handling of simple apparatus, and in the methods of making a systematic record of observations.

The series of laboratory experiments includes both qualitative and quantitative work, and is intended not only to illustrate the text-book and class room work, but also to develop rapidity, neatness and accuracy of manipulation.

TOPICS FOR STUDY IN ACADEMIC WORK.

The properties of matter; the mechanics of solids; composition and resolution of forces; laws of motion; work and energy; gravitation; accelerated motion; falling bodies; the pendulum; simple machines;

mechanics of fluids; transmission of pressure; pressure due to gravity; barometer; air pump; Boyle's law; the siphon; water pumps; specific gravity; heat; thermometer; conduction; radiation; mechanical equivalent of heat; magnetism, its nature and laws; magnetism of the earth; electricity; static electricity; electric machines; electric currents, their effects and measurement; induction; the dynamo; the electric light; the telegraph; the telephone; sound; character of wave motion, transmission and velocity; pitch; vibration, of strings, in pipes; harmony and discord; light, its nature, velocity, reflection, refraction; lenses; spectrum; color; microscope; telescope; camera.

TOPICS FOR DISCUSSION IN METHODS.

Preparation, presentation of, and time devoted to nature study lessons for the grades of common schools; illustrations of the principles of the simple laws of physical science; simple devices for illustration; aid and direction from teacher, kind of, amount of; text book, when and how used; note-book; use of representation, by drawing, by formula.

CHEMISTRY.

The course in chemistry is intended to be pursued in close connection with that in physics. The student applies his knowledge of experimental methods to the study of the laws of chemical phenomena. Some attention is devoted to practical chemical problems requiring mathematical computation. Three hours a week are devoted to laboratory work by the student.

TOPICS FOR STUDY IN ACADEMIC WORK.

A study of the laws of chemical action in connection with the properties, relations and compounds of the more important elements; oxidation; combustion; reduction; acids; bases; salts; reactions and their expression; a brief view of organic chemistry,

with special reference to the chemistry of common life; oils and fats: action of soaps; cooking; fermentation; alcohol; carbohydrates: conservation of matter and energy; an introduction to the qualitative analysis of inorganic compounds.

TOPICS FOR STUDY IN METHODS.

Amount and kind of direction by teacher in experimentation; preparation and use of simple appliances for illustration and investigation; selection of matter suitable to nature study lessons in the grades of the common schools; use of text-book; use of note-book; value and use of representation, by drawing, by symbols, by equations.

GEOGRAPHY.

Geography embraces so wide a range of subjects that it is found convenient to treat it under three heads, Physical, Mathematical, and Political.

PHYSICAL GEOGRAPHY.

The course in Physical Geography is intended to give the student a clear understanding of the history and structure of the earth, and of the phenomena occurring upon its surface. The student obtains a broad view of the process of "world making" and the connection with it of each of the three great kingdoms, mineral, vegetable and animal.

The aim throughout, is to enable the student, as a prospective teacher, intelligently to explain the facts of geography, and also to furnish material for interesting and valuable work in the line of nature study.

TOPICS FOR STUDY IN ACADEMIC WORK.

The solar system, the earth as a planet, its motion, its magnetism; structure of the earth's crust, geological time, rocks, fossils; physiography, relief

of the earth, causes, their operation, coral reefs and islands, volcanic phenomena, earthquakes; springs, rivers and lakes, drainage; ocean waters, tides and currents; the atmosphere; climate, its modification, winds, storms, cyclones and tornadoes; precipitation; glaciers and icebergs; atmospheric electricity; life upon the earth—(*a*) plant life, structure, physiology and classification of plants, geographical distribution, economic value; (*b*) animal life, classification and distribution, commercial value; (*c*) the human family, classification, types, races, people, characteristics; mineral products, distribution, mining methods, economic value; geographical history of the United States, its physiography, coast line, drainage, climate, life and products.

TOPICS FOR DISCUSSION IN METHODS.

Development of ideas of place, position, distance and direction; ideas and names of physical features of home location, occupation of people, product of locality, forms of local government; representation by maps of locality of school, of town, of county, of territory; how to proceed from home geography to state; value of vivid description and graphic representation; appeals to the imagination; presentation of study of the earth as a whole; subdivision of the earth's surface—natural, artificial; use of text-book—time of, extent of, manner of; map drawing—place of, value of, manner of conducting; exhibition of products—natural, artificial; simple apparatus—construction, use; value of experiments; sand and clay models; use of maps, charts; graphic method of illustration as applied to comparative areas, wealth, industries, productions, temperature, rainfall: explanation of phenomena—day and night, change of seasons, weather; collection and use of specimens; additional reading—kind, amount; supplementary material; outlines; field observations; excursions; original notes on geology, geography and familiar weather phenomena.

POLITICAL GEOGRAPHY.

This study is treated as a part of history, and is pursued by the student in close connection therewith. The purpose of this instruction is to give the student a comprehensive view of the earth's surface as subdivided by man, and the changes wrought in developing its resources and utilizing its products to supply his wants.

TOPICS FOR DISCUSSION IN ACADEMIC WORK.

Political divisions; boundaries of countries; means of travel; means of communication; commerce; manufactures; government; religion; occupations; productions—artificial, manufactured.

Topics for discussion in methods are found in Physical Geography and History lists.

MATHEMATICAL GEOGRAPHY.

The purpose of instruction in this branch, is to give the student an accurate knowledge of the figure, magnitude and motions of the earth, the means of determining the position of places upon its surface, the manner of delineating a portion of it by maps and charts, and a general knowledge of the relation of the earth, as a planet, to the solar system.

TOPICS FOR STUDY IN ACADEMIC WORK.

Shape of earth, proofs; its motion, effect of; earth's orbit; its axis; its inclination to its orbit; effect of its inclination; equator; parallels; meridians; latitude; longitude; polar circles; zones; tropics; astronomical terms; equinoxes; solstices; twilight; boundaries of political divisions.

TOPICS FOR DISCUSSION IN METHODS.

Use and construction of globes and other illustrative apparatus; maps; projection; illustration by

charts, diagrams and pictures; taking north and south line; finding latitude and longitude; sun dial.

HISTORY.

The records of the struggles and progress of the human race toward development, furnish an inexhaustible supply of material for the exercise of mental activity. The chief value of historic study is to prepare humanity to profit by the triumphs and avoid the mistakes of the past.

History is closely connected with all other branches of study. It is pursued in connection with its more closely correlated branches, geography and literature. It is the aim, not only to teach the important facts of history, but to lead the student to discover the causes of events, to note the effect of physical conditions as determining the activities of man, and these in turn as fixing the habits which mould character; and also to note that the character of a people, to a great extent, determines their history.

TOPICS FOR STUDY IN ACADEMIC WORK FOR UNITED STATES HISTORY.

Political status of Europe at the time of the discovery of America; condition of the poor people of Europe at that time; characteristics of the age of discovery; claims of the Northmen; life and character of Columbus; discoveries and explorations—Spanish, English, French and Dutch; settlements—time, place, person, object, government, growth, peculiar characteristics and principal events of each; intercolonial wars—cause, time, participants, principal events of each; life in the colonies—religion, education, home, dress, customs, occupations, modes of travel, means of communication; Revolutionary War—cause, time, principal events, principal actors, effects on the people, results to the nation; the growth of the nation; the confederation; the constitution;

the first president; territory; acquisition of territory; financial policy: foreign policy; troubles with France; troubles with England; troubles with the Barbary States; War of 1812; Mexican War; Admission of new states; inventions; progress in arts and sciences: internal improvements; slavery; Civil War; political parties; labor movements; Indians: general prosperity.

TOPICS FOR STUDY IN ACADEMIC WORK FOR ANCIENT HISTORY.

History defined and classified; philosophy of history: aids to history; origin of nations; races of men; the world as known to the ancients: India; China; Egypt: Chaldea; Assyria; Babylonia; the Hebrews; the Phoenicians; the Persian Empire; Greece—its geography, its people, their religion, heroic age, early growth of Sparta and Athens, the Peloponnesian wars, Spartan supremacy, Theban supremacy, Macedonian supremacy, architecture, sculpture, painting, literature, science, social life; Rome—the kingdom, the early republic, Punic wars, last years of the republic, the empire, decline and fall of the empire, civilization, social life, architecture, literature.

TOPICS FOR STUDY IN ACADEMIC WORK FOR MEDIAEVAL HISTORY.

Migration of the Teutonic tribes; conversion of the Barbarians; fusion of the Latins and Teutons; Eastern Roman Empire; Saracens; Charlemagne; Northmen: use of Papal power; feudalism; Norman conquest of England; the Crusades; Papal supremacy; growth of towns; city republics; revival of learning; growth of nations and governments of Europe.

TOPICS FOR STUDY IN ACADEMIC WORK FOR MODERN HISTORY.

Reformation under Luther; the English reformation and the Tudors; ascendency of Spain; rise of the Dutch Republic; Huguenot Wars; Thirty Years'

War; ascendency of France; England under the Stuarts; rise of Russia; rise of Prussia; French Revolution: Napoleon; Congress of Vienna; German freedom; liberation of Italy; tendency of the British government; present state of European nations.

TOPICS FOR DISCUSSION IN METHODS.

Correlation of history and geography; correlation of history and literature; selection of subject matter suited to the several grades of common school work, and method of presentation in each; use of fairy tales, Bible stories, stories of adventure, biographies; when first to use the text book, how to use it, use of historical novels, historical poems, poems containing historical allusions; use of reference books; historical essays written by pupils; application and exemplification of use of laws for aiding the memory; appeals to the sensibilities, especially, in teaching patriotism; use of historical cards, charts, maps, pictures, and topical outlines.

CIVIL GOVERNMENT.

In our country, where the people elect the lawmakers, the study of civics is a necessary part of the common school curriculum. The aim of instruction in this branch, is to give the student such a knowledge of the underlying principles and the workings of our government, as will enable him to give instruction in these matters, so indispensable to good citizenship. Special attention is given to the school law of Arizona.

TOPICS FOR STUDY IN ACADEMIC WORK.

Town and city government; objects of government; colonial government; Continental Congress; Declaration of Independence; Articles of Confederation; adoption of the Constitution, its amendments, its preambles; the legislative department of government; the Senate; the House of Representatives; the

power of Congress; suffrage; restrictions upon the national government; the executive department; the judicial department; foreign ministers; foreign relations; Electoral Count bill; taxation; public schools.

TOPICS FOR DISCUSSION IN METHODS.

Use of diagrams and tabular outlines; use of reference books; value of memorizing; relation to history; classification; analysis; when taught; to what extent taught.

PENMANSHIP.

Since the art of representing script forms is closely allied to that of other graphic representation, penmanship and drawing have been assigned to the same department of school work.

Students will be required to become accurate and rapid writers, and so thoroughly to master the analysis and classification of forms, and the various movement drills, as to produce like results in their pupils.

TOPICS FOR STUDY AND PRACTICE.

Form, proportion, relative size, and shading of standard letters; Arabic figures; punctuation marks; spacing in words and sentences; indentation of paragraphs; Roman notation; signs and symbols used in school work and ordinary business.

TOPICS FOR DISCUSSION IN METHODS.

Method of teaching writing in grades; styles of writing—vertical, semi-angular, running hand; value of movement drills, of unision of movement, of analysis of forms; position: how to obtain rapidity; place and value of blackboard writing; slate writing; age at which the child should begin to write; time given daily to writing exercise.

DRAWING.

This course comprises elementary work in each of the three departments, Pictorial, pertaining to the appearance of objects; Mathematical, pertaining to the facts of objects; and Decorative, pertaining to ornamentation.

The work is designed to cultivate the taste of the student, to stimulate his powers of observation of material things, to contribute to his pleasurable resources, and to enhance his teaching power.

The student is required to gain such a knowledge of drawing as will enable him to make simple, freehand drawings of objects, singly and in groups, rapidly and accurately, on the blackboard and on paper; to make simple working drawings; and to design ornamental patterns for surfaces, borders, and center pieces.

TOPICS FOR STUDY IN ACADEMIC WORK.

Type forms, laws of perspective, light, shade, shadow, conventionalizing.

TOPICS FOR DISCUSSION IN METHODS.

Eye training; pencil holding; position; materials; clay modeling; matter, kind, quantity; time and method of presentation.

BOOKKEEPING.

Double entry bookkeeping and its modifications to suit the needs of the various kinds of business, are carefully taught. The theory and relation of double entry and single entry are fully discussed. Business usages and the common principles of commercial law are also taught.

TOPICS FOR STUDY IN ACADEMIC WORK.

Abbreviations; signs; classification of accounts; double entry; day book; journal; posting; closing

ledger; commercial forms; bill books; invoice book; shipments; account sales; partnership; joint stock; farm accounts; balance sheet.

TOPICS FOR DISCUSSION IN METHODS.

Illustration of terms, of forms, of rulings, of day-book entries, of journalizing, of posting, of closing ledger, of balance sheet, of bill book, of order-book, of time account.

PHYSICAL EDUCATION.

Physical vigor is believed to be essential to the best mental effort. Health of body and mind, grace of movement and symmetry of form, are best acquired and preserved by judicious exercise. To secure this end, daily physical exercise, under the supervision of a tutor, are required of every student. These drills consist of postures and movements calculated best to secure the objects for which they are designed.

Marches and movements are regulated by music.

The students are given instruction in this branch, to such an extent and in such a manner, that they will be able to carry forward this work, successfully, in their schools.

MILITARY DRILL AND INSTRUCTION IN TACTICS.

During thirty weeks of the school year, instruction and drill in military tactics are given. Each male student is required to attain such proficiency as will enable him to comply with the provisions of law in regard to military instruction in the public schools.

MUSIC.

Instruction in this branch comprises vocal music only. Its aim is to give such a knowledge of the elements of music, and such practice in singing, as will enable the student to conduct singing exercises in the common schools, and to inspire the pupils with a love for this refining and ennobling art.

TOPICS FOR STUDY.

Theory of music necessary to reading songs in one, two, three and four parts; scales, major and minor, their intervals and relations to each other; rythm; exercises for gaining thought control of the breath in singing; voice culture to establish a bright, clear tone in each of the three registers; phrasing; musical style.

PSYCHOLOGY.

The course in this branch begins the first quarter of the second year. It precedes the special instruction in methods of teaching the several branches comprised in the public school curriculum. It is designed to prepare the student to receive such instruction with profit.

Its aim is to aid the student in developing the power and fixing the habit of observing, analyzing and interpreting the physical phenomena attendant upon the mental activities and states. This study is pursued, as far as practicable, inductively. The observation of the manifestation of mental powers and conditions is directed chiefly to the child.

Students are also made familiar with the technical terms peculiar to this science, in order that they may express themselves clearly as well as understand the discussion of methods based upon it.

The work of the elementary course deals with the elements of psychology, comprising investigation of the general nature of the mind, the basis of psychic life, stages of knowing, characteristics and conditions of feeling, conditions and modes of consciousness, and elements of volition.

The work of the advanced course is a more comprehensive investigation and discussion of the whole subject, and is intended to give the student such a knowledge of the states, powers and activities of the mind, their inter-relations and the laws governing their growth, as will enable him to pursue a rational course of procedure in his professional work.

TOPICS FOR STUDY.

The senses—cephalic and somatic; nervous organisms; pyscho-physics; consciousness—its conditions, limits, facts and modes; immediate knowledge—perception, self-perception, intuition; mediate knowledge—representation, memory, imagination, thought; feeling—emotion, desire; volition—elements of, freedom of.

LOGIC.

Logic, being a subordinate branch of psychology, is given considerable attention in this connection. Since teachers are expected to train their pupils in the art of reasoning, a knowledge of the laws and principles of logic are a necessity to them.

TOPICS FOR STUDY.

Terms; fundamental axioms; genus; species; differentia; abstraction; generalization; proposition; arguments; syllogysm; figure; modes; fallacies; Aristotle; Bacon.

ETHICS.

Ethics is also studied in this connection. The purpose of this work is to give the student clear ideas of the principles which should govern human actions and the moral duties of right conduct, so that he may be able to practice them and impress them upon his pupils.

TOPICS FOR STUDY.

The Socratic, the Pauline and the Herbartian ideal; influence of home, church, school; instruction; government; discipline; feeling; reason; will.

PHILOSOPHY OF EDUCATION.

Education is conceded to be a science, when con-

sidered in reference to the fact, that all school work can and should be based on principles, rationally determined and accurately defined.

The aim of this branch of study is to define the nature, aim and limits, and the fundamental principles of education; to discuss the problems of physical, intellectual, and moral development and training; to make each student a teacher who shall be able logically to determine method in school work—one who will not accept formula as method, but shall be able to be governed by method in adopting formula.

The student will be constantly encouraged to test all conclusions, now generally received, in regard to teaching, in the light of the present knowledge of psychological principles, and to state clearly the principles that his investigation verifies, and to work out plans for the application of these principles, in teaching all the common school branches of study.

TOPICS FOR STUDY.

General idea of education—its ideal, nature, form, limits, kinds, means, agencies, pyschological epochs; logical order; habit; educational values of studies respectively; interest as an element in the selection of studies; order of succession of studies; basis of correlation of studies; relative time to be given to each study.

HISTORY OF EDUCATION.

In a general sense, the history of education is the story of the growth and development of the human race; but in this course of study, the term will be restricted to a brief sketch of the ancient systems of education; the schools of mediæval and modern times; a study of the lives of the most noted educational reformers, and the principles advocated by them; a comparison of the school systems of the present time; a special study of the schools of some state of the union.

TOPICS FOR STUDY.

Educational system—of antiquity, of Greece, of Rome, of the early Christians, of the sixteenth century; Jesuit schools; Comenius; Pestalozzi; Froebel; origin of lay and national education; systems of education of the nineteenth century: rise and progress of education in the United States.

SCHOOL MANAGEMENT.

Instruction in this branch is given mostly by lectures. The discussions cover the whole field of organizing, governing and conducting primary and grammar schools. Its aim is to develop a system of control that shall be in harmony with the principles set forth by the new education, and to make the student skillful in the performance of the various duties of the school room, by plain, practical and suggestive lessons, rather than by the presentation of elaborate theories.

TOPICS FOR DISCUSSION.

Elements of successful management; educational instrumentalities; school organization; school government; courses of study; programs; study; class management; recitation records; examinations; keeping records; reports; promotions; graduation; graded schools; supervision; conditions of educational progress.

METHODS.

The object of this course is to make our students thinkers and investigators in the great field of education, rather than to furnish them with elaborate schemes for the presentation of knowledge.

Child study will be made the basis of the course.

It will be taken for granted that previous training has given the student a thoroughly well organized knowledge of the subject matter he is to teach,

and accordingly, each subject will be dealt with only from a pedagogical standpoint.

In studying the subject, two questions will be kept in mind:

1st, How does a child naturally react against this form of mental activity?

2nd, What shall we aim to achieve in a child's development by means of this branch of study?

In order to answer the first question, we must study children.

In order to answer the second, we must study the standards of education as set forth in approved courses of study and in the writings of our leading educators.

Therefore, each subject will first be studied in the light of children's native interests, by means of the writings of Hall, Barnes, and other great students in the realm of child-study.

In order to determine the ultimate aim of our teaching, a careful study will be made of the demands of the public as voiced by the courses of study of the best schools of our country. These will be compared with the standards offered by Herbert Spencer and other leading thinkers of our time.

An attempt will then be made to determine the most natural grade leading from the native interests of the child to the demands of society.

CHILD-STUDY.

In addition to making a careful study of the literature of this subject, studies will also be made by the student-teachers upon the children in the practice school; this will be done with no particular hope of doing work of much scientific value, but to make the students familiar with the methods of child-study, to inculcate a professional spirit, and to further the aim of the course as expressed in the opening paragraph.

During the few months the practice school has been organized, careful notes have been taken upon

the children's plays, spontaneous and traditional, while their natural inclinations in drawing, their reaction toward color, their attitude toward punishment, and other interesting lines have been carefully observed and reported to the class by different students.

PLANS AND DEVICES.

This important feature is met by having carefully prepared plans submitted and criticised by the instructor in Methods before being presented in the Practice School, and again by the criticism period where the Method teacher in the capacity of Director of Practice School meets the student-teachers and criticises the work of the day.

OBSERVATION AND PRACTICE.

All students are required to observe the illustrative lessons given by the critic teacher, for the purpose of exemplifying the application of psychological laws to methods; to note the manner, order, and steps of procedure; to discover the psychological principles upon which they are based; to outline plans for conducting recitations; to criticise the plans and teachings of other students: to teach in the Practice School forty minutes a day for thirty weeks.

The purpose of this, is to lead the student to correct methods; to assist him in eradicating his faults: to cultivate in him taste and discrimination in originality of procedure; to enlarge his conception of the work.

TOPICS FOR STUDY.

School tactics; elements of governing power; class management; school regulations.

THESES.

In the profession of teaching, there is a demand for fuller investigation, greater originality in the

the application of principles, and a clearer expression of the results of individual experience, if the teacher is to be more than a mere imitator. Every person, before entering upon the duties of the teacher, should evince a lively interest in all matters pertaining thereto; and should be able to discuss intelligently, the leading educational topics of the present time. Before graduation, every student is required to prepare and present to the faculty a thesis on some educational topic approved by them.

SCHOOL OF PRACTICE.

This department of the Normal School is now in successful operation. The course of study of this school comprises the usual work of all the grades of the primary and the grammar school. It is the aim of the faculty to place this work on a rational, pedagogical basis and adapt it to the environment of the pupils.

The work done in the several grades of the School of Practice by the students in the Normal Department, respectively, embraces observation, supervision of school work during study hours, and teaching. All work of the student-teacher is done under the supervision of a critic teacher.

ADMISSION.

Candidates for admission to the Normal Department must be fifteen years of age, and must possess a fair knowledge of the academic branches of study required for a second grade county certificate, before they will be permitted to enter upon the work of this department.

Candidates for admission, holding second grade county certificates, will be admitted, without examination, to the classes beginning the work of the first year of the course.

Candidates for admission, holding territorial or first grade county certificates, will be admitted with-

out examination to the classes pursuing the studies of the second semester of the first year of the course.

Certificates of standing from an accredited high school or grammar school, evidencing the scholarship of a candidate for admission, will exempt the candidate from examination in the branches so vouched for.

A limited number below the age of fifteen years will be admitted to the School of Practice.

Examinations will be held the first and second days of each quarter for the accommodation of the applicants for admission at that time, and also, at other times when the circumstances seem to warrant it.

Candidates for admission, not fully qualified to enter the normal department, can always find classes suited to their advancement in the model school, to which a limited number will be admitted.

Candidates for admission to any department of the normal school or model school, should provide themselves with certificates of scholarship from the teacher of the last school which they attended. Such certificates aid the faculty materially, in assigning students to proper classes.

ADVANCED STANDING.

Candidates for advanced standing will be given a final examination on any subject comprised in the academic work of the course, at such times as the faculty may be able to appoint.

The Territorial University, and the Los Angeles Normal school have arranged with this school for the mutual acceptance of grades and standing in scholarship of students. Similar arrangements will doubtless be made with other schools of like grade.

GENERAL INFORMATION.

DESIGN.

The legislative enactment providing for the organization of this school, also states the design and purpose of its establishment. It is as follows: (Chap. III, Par. 2515, Sec. I, Code of Arizona.) "That a Normal School for the Territory of Arizona is established at Tempe in Maricopa County, Arizona, the purpose of which shall be the instruction of persons, both male and female, in the art of teaching, and in all the various branches that pertain to a good common school education; also to give instruction in the mechanical arts and in husbandry and agricultural chemistry, in the fundamental laws of the United States, and in what regards the rights and duties of citizens."

LOCATION.

Tempe, the site of the school, is situated in the beautiful valley of the Salt River, seven miles from the Capital. It has railroad connection with the Southern Pacific and Santa Fe systems by the Maricopa and Phoenix R. R., and the Maricopa, Phoenix and Salt River Valley R. R.

The climate during the whole school year is delightful. The school is in the midst of an intelligent and moral community, engaged in farming and fruit raising. Six church societies hold services in this city.

BUILDINGS AND GROUNDS.

The campus includes twenty acres; the north half is set with shade and ornamental trees and shrubs. On this part of the campus the buildings are situated.

The building heretofore used for school purposes,

was erected in 1886, and is a one story, brick structure, seventy feet long and sixty wide, with a broad veranda entirely surrounding it.

The new Normal School building is now completed. It is a commodious structure, one hundred and thirty-six feet long, eighty feet wide, and three stories high; the lower story is of brown sandstone, the other two, of red pressed brick with sandstone trimmings. This edifice is beautiful in architectural design, convenient in arrangement and substantial in construction. These two buildings are ample for the school at present.

LECTURES.

In addition to the lectures given by the Faculty, a series of entertainments of a high order, mostly lectures, is arranged each year. They have been a source of great profit and pleasure to the students.

The frequent appearance of prominent people on the rostrum at the opening exercises, most of whom favor the students with short, eloquent and instructive addresses, is a pleasant feature of the school.

READING ROOM.

In this country where the trend and successful management of governmental affairs depend so much on the intelligence of the individual citizen, the advantage of a reading room for young men and women, especially those soon to become teachers, are not easily overestimated. In the reading room of this institution will be found the better educational and literary periodicals, a few metropolitan dailies, and most of the weekly issues of the newspapers of the territory.

DIPLOMAS.

In order to receive a diploma, a student must

have attained the age of eighteen years, must have attended this institution at least twenty-two weeks, and must have passed a rigid examination in all the studies of the course. If it appears from the records of examinations, daily recitations, and deportment, that the applicant for graduation possesses the learning and qualifications necessary to teach a good common school, such applicant shall receive a diploma that will entitle the holder to teach a primary or a grammar school in any county in this territory.

DISCIPLINE.

Self government, guided by a strict regard for the rights of others, and a delicate appreciation of the proprieties of one's environment, is the only kind of government capable of developing and fostering the conduct and character requisite to make the successful teacher.

It is the purpose of this faculty, to inculcate correct ideas of conduct, to stimulate a healthy sentiment in regard to it, and to make the students self-respectful, self-helpful, self-reliant and self-governing. All students whose best endeavors are not in harmony with this purpose are dismissed from the school.

REGULATIONS.

Absence from any required exercise must be accounted for before a student can be permitted to enter a succeeding recitation.

Students will not be permitted to take work outside of their regular classes, without the express permission of the Principal.

Students will not be permitted to take studies out of their regular order except by express permission of the Principal.

Students will be classified as first year students

till they have obtained one-third of the credits of the whole course; as second year, two thirds.

APPARATUS.

This school is provided with excellent apparatus for illustrating the principles of the natural sciences taught. Additions will be made from time to time, as the advancement of science and the needs of the school demand.

LIBRARY.

The library now contains more than seven hundred volumes, covering the fields of history, science, education and general literature. Many of the valuable publications of the Smithsonian Institute, as well as the reports of the Commissioner of Education, and statistical reports of the Interior Department, are found on its shelves. It is supplied with reference books sufficient for the present needs of the school. Large additions will be made to the library during the coming year.

MUSEUM.

The museum already contains many valuable pieces of archæological relics, and a large number of interesting specimens of animals, plants and minerals, characteristic of Arizona, such as copper, silver, gold, and lead ores, native insects, birds, small animals and plants; in fact, a valuable nucleus of a museum of such a wide range of interesting specimens as Arizona alone can produce.

During the past few years, many friends of the institution have contributed valuable articles. Their generosity and interest in the museum are appreciated and hereby acknowledged. The students have taken great interest in the museum and have contributed much to its success.

Contributions are solicited. Transportation on articles donated will be paid by the school. All packages should be addressed, "Territorial Normal School, Tempe, Arizona."

LITERARY SOCIETIES.

There are two literary societies connected with the school, the Zetetic and the Hesperian.

The public meetings of each are held fortnightly, on alternate Friday evenings, and are conducted according to parliamentary usages. They are designed to acquaint their members with the customs and practices of deliberative bodies, to give an impetus to literary investigation, and to develop a talent for literary work, public speaking and extemporaneous discussion. The members of the faculty are honorary members of these societies. Students who creditably perform their duties as members of one of these societies are excused from a part of the regular rhetorical exercises in the school.

TEXT-BOOKS.

In the scholastic year 1896-7 the text-books named below were used. Algebra, Wentworth's Complete; Arithmetic, White's Complete, Wentworth and Hill's High School; Botany, Macbride's Lessons; Bookkeeping, Williams and Rogers'; Chemistry, Williams' Introduction to Chemical Science; Civics, Andrew's; English Literature, Kellogg's; Ethics, Peabody's; Geography, Political, Frye's; Geography, Physical, Appleton's; Geology, LeConte's; Geometry, Wentworth's; Grammar, Maxwell's; Grammatical Analysis, Greene's; History, U. S., Fiske's; History, General, Meyer's; History of Education, Quick's; Orthography, Swinton's; Physiology, Brand's; Physics, Carhart and Chute's; Psychology, Davis'; Reader, Cumnock's; Rhetoric, Hill's; Zoology, Colton's.

APPOINTMENTS.

It is greatly desired that the members of the Legislature, respectively, appoint students to the Normal School, as authorized by law; and that County Superintendents and all others interested in supplying the schools of this Territory with well educated and properly trained teachers, should recommend to this school persons who desire to become teachers and who give promise of usefulness in that profession.

ALUMNI.

It is confidently believed that all graduates of this school will manifest a lively interest in its welfare. Their influence on the schools of the Territory is already plainly seen and it will doubtless increase as they increase in experience and numbers.

The faculty desire to be informed of the success of the graduates and also to render them professional assistance, as far as possible.

THE ARIZONA NORMAL ALUMNI ASSOCIATION.

This society, as its name indicates, is composed of graduates of this Normal School. It holds two regular meetings each year, and an annual banquet the next day after the commencement. Its officers for 1896-7 are Lee Gray, class of '91, President: Manie Anderson, class of '93, Secretary.

TEACHERS' BUREAU.

The Faculty do not wish to be understood as agreeing to furnish employment for their students upon graduation, but feel warranted in saying, that they have many opportunities of recommending teachers to good positions, and that they are pleased to do so, thereby rendering a service, mutually help-

ful to their students and to school officers desiring to employ teachers.

TO SCHOOL OFFICERS.

The Principal of this school, when requested, will take pleasure in furnishing to school officers, accurate information in regard to the fitness of students and alumni of this school to teach; also, when desired, will put them in communication with teachers seeking employment.

In order to be able intelligently to recommend a teacher to a position, it is necessary that the Principal be in possession of a full, detailed statement of the requirement of that position and its surroundings.

EXPENSES.

Board can be obtained in good families at from $15.00 to $20.00 a month; in clubs for much less. By hiring rooms and doing their own cooking, students are able to make the cost of living conform closely to the expenditure which they desire to make. It should be borne in mind in this connection, that fruit, garden vegetables and other table supplies are much cheaper in this vicinity than in any other part of the Territory. Little fuel is needed. Rooms can be rented at a cost, per pupil, of from twenty-five to fifty cents per week, provided that two persons occupy one room.

The Alpha Boarding Club has furnished its members with good board at $8.50 per month per capita; this includes table supplies, expense of cook, fuel, etc. The members have been supplied with good rooms at $1.25 apiece per month, where two occupy one room, making a total for room, board, lights and fuel of $9.75 a month for each student.

The cost of books and stationery ranges from $10 to $15 a year.

An incidental fee of fifty cents a month is charged each student.

Examination paper, pens and ink are furnished the students free of cost.

TUITION.

Tuition is free to all students who sign the declaration of intention to teach in Arizona, and to those who obtain an appointment from a member of the legislature. All others are charged $1.00 a month.

REDUCED RAILROAD RATES AND MISCELLANEOUS ITEMS.

Half fare rates between their homes and Tempe, both ways, are granted to students of the Normal School by all the railroads in the Territory. Students wishing to secure these rates, will receive the necessary information in regard to obtaining them, by writing to President McNaughton to that effect.

Students from the north will find three railroad trains and a stage running daily from Phoenix to Tempe; from the south, one train daily from Maricopa to Tempe; from the east, two trains daily from Mesa to Tempe.

Students, by calling on the Principal on their arrival at Tempe, will receive such information and aid in regard to securing rooms and board as he may be able to give them.

CORRESPONDENCE.

All correspondence in regard to the management of the school, expenses of living, conditions of admission, etc., and all applications for catalogues and announcements should be addressed to.

JAMES McNAUGHTON,
Tempe, Arizona.

3 0112 105606617